



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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October 22, 2018

HRE Crawford, LLC
Attn: Mr. Ryan Lawlor
5 Revere Drive, Suite 320
Northbrook, Illinois 60062

Re: 0316005761/Cook County
Chicago/ComEd-Crawford Station
Site Remediation Program/Technical Reports

Dear Mr. Lawlor:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the July 2018 *Comprehensive Site Investigation Report* (CSIR) document (received August 14, 2018/Illinois EPA Log No. 18-67656). The document was prepared by V3 Companies (V3).

The CSIR document is disapproved. The following comments were generated as a result of this review:

1. 35 Illinois Administrative Code (35 IAC) 740.420(b)(1)) requires the comprehensive site investigation to determine the nature, concentration, direction and rate of movement and extent of the 35 IAC 740 Appendix A Target Compound List (TCL) contaminants of concern (COCs) and the significant features of the remediation site and vicinity that may affect contaminant fate and transport and risk to human health, safety, and the environment. This regulation has not been satisfied based on the following:
 - a. A detailed discussion of the extent of horizontal and vertical contamination, in relation to each specific sample location/sample area, has not been provided.
 - b. The frequency of analysis of the TCL in soil is deficient for an approximately 70-acre site. The Tables in the CSIR appear to show that approximately five (5) samples [e.g., NS-GP-114 (7-9 feet), NS-GP-112 (7-9 feet), NS-GP-105 (1-3 feet), and NS-GOP-105 (8-10 feet), SS-GP-117 (2-4 feet)] were analyzed for the full TCL during

the 2018 sampling event. Generally, sites in the site remediation program perform baseline TCL sampling at a frequency of two (2) TCL samples per ½-acre. In some cases, the TCL frequency may be reduced based on the proposed site remedy (i.e., pathway exclusion). However, since the proposed remedy is not known to date, additional TCL sampling is required.

- c. The frequency of analysis of the TCL in groundwater is deficient for an approximately 70-acre site. The Tables in the CSIR show that only groundwater collected from four (4) groundwater monitoring wells installed by V3 in 2018 (along with four (4) wells installed by ENSR in 1998) were analyzed for the full TCL. Additional groundwater monitoring wells should be installed, and groundwater collected from these wells should be analyzed for the full TCL. In addition, some of these wells should be installed adjacent to the Chicago Sanitary Ship Canal for potential evaluation of surface water conditions (35 IAC 742.320(f)).
- d. The frequency of analysis of TCLP metals in soil is deficient for an approximately 70-acre site. The Tables in the CSIR appear to show that four (4) samples were analyzed for TCLP metals. Additional TCLP metals analysis should be performed where elevated total metals concentrations were observed in the March 2018 sampling event and where total metals concentrations are observed in future sampling events. This TCLP analysis is pertinent to demonstrate compliance with 35 IAC 742.305(e).
- e. The Tables in the CSIR show that soil sampling was deficient in specific areas of concern (AOCs) at the site as follows:
 - Only one (1) soil sample was collected in the locomotive house
 - Only two (2) soil samples were analyzed for volatile organic compounds (VOCs) in the oil/fuel/hazardous storage area
 - Only three (3) soil samples were actually collected within the filled-in West Branch of South Fork of Chicago River
 - Only one (1) soil sample was collected in the waste water treatment plant
 - Only one (1) soil sample was collected in the ash dewatering area
 - Only two (2) soil samples were collected in the chemical fill station
 - Only one (1) sample was collected in the debris pile area (south)
 - Only six (6) samples were collected in the generating plant
 - Only one (1) sediment sample was collected in the oil/water separator pond
 - Only three (3) soil samples were collected in the tractor shed/maintenance
 - Only polychlorinated biphenyl (PCB) and total petroleum hydrocarbon (TPH) analyses were performed on soil samples collected in the transmission building/reactor
 - Only one (1) soil sample was collected in the debris pile (east)

Additional soil sampling must be performed to further characterize each specific REC.

- f. During future soil sampling activities, it is recommended that several of the soil samples analyzed should be from the surficial interval (0-3 feet). The rationale of the surface interval analysis is to evaluate potential outfall emissions from the former generating plant.
2. Multiple sections in the CSIR discuss PCB impacts above applicable remediation objectives (ROs). Ultimately, acceptance of any PCB mitigation efforts is at the discretion of the USEPA. The Illinois EPA anticipates receipt of a copy of UESPA review comments on this issue in a forthcoming document.
3. Multiple sections in the CSIR state that 21 surface and sediment samples collected in 1998 contained TPH concentrations above the 35 IAC 742.305(a) soil attenuation capacity, and all of these samples contained total TPH concentrations greater than 25,000 mg/kg. The CSIR further states that these findings were not duplicated in the 2018 round of sampling and that TPH concentrations likely have naturally attenuated and are no longer present. The Illinois EPA does not concur with this conclusion. Evidence has not been provided that each specific 1998 sample location has been reanalyzed at the specific location and corresponding depth interval where the 1998 TPH results were documented. The Illinois EPA recommends each specific 1998 TPH concentration above the soil attenuation capacity be reevaluated appropriately. In addition, this issue is pertinent in relation to the proposed site-specific fraction of organic carbon (f_{oc}) values discussed below. Finally, the soil boring logs in the document show that select soil samples collected in 2018 contained evidence of staining and/or odors and were not analyzed for TPH (e.g., NS-GP-106 (4.5 feet), SS-GP-111 (5-15 feet), ES-GP-106 (7-9 feet), etc.). All 2018 soil samples, as well as future soil samples collected, where staining and/or odors are documented must be analyzed for TPH at the corresponding depth intervals to demonstrate compliance with 35 IAC 742.305(a).
4. Multiple sections in the document state there is no evidence that mercury exists in its elemental form at the site. Based on the historical use of the site as a generating plant, the Illinois EPA does not concur that this conclusion can be certified. As a result, it is recommended that all total mercury concentrations above applicable ROs be evaluated appropriately.
5. Table 4.4 in the CSIR presents the site-specific f_{oc} evaluation conducted at the site. The Illinois EPA does not approve of the proposed site-specific f_{oc} values and offers the following discussion on determining site-specific f_{oc} values:
 - a. It must be demonstrated that the location of the f_{oc} samples collected correlate to the same depth and geologic unit as the contamination that is being evaluated. Specifically, site-specific physical soil parameters must be determined from the portion of the boring representing the stratigraphic unit(s) being evaluated.
 - b. It must be demonstrated that the f_{oc} sample is collected from uncontaminated areas of the site. The Illinois EPA requires co-sampling of the f_{oc} sample for VOCs, and semi-

volatile organic compounds (SVOCs) listed in 35 IAC 740 Appendix A. Tables A and B.

The Illinois EPA anticipates receipt of reevaluation of the site-specific f_{oc} values in a forthcoming document.

6. The CSIR did not discuss whether the buildings contained basements or were slab-on-grade construction or whether or not the buildings contained sumps or elevators. This is pertinent in relation to the indoor inhalation exposure route.
7. A copy of the most recent Phase I conducted by V3 was missing from Appendix A.8.
8. Depth of groundwater, hydraulic gradient, and groundwater flow direction were not discussed in detail in the CSIR.
9. Based on North Section Tables 4.1.2 and 4.1.5, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and lead also exceed the soil component of groundwater ingestion exposure route RO but were not listed in Section 5.5.1. Please clarify.
10. Section 5.5.2 states that arsenic exceeded the construction worker ingestion RO however South Section Table 4.2.5 did not show any exceedances for arsenic exceeding the construction worker ingestion RO. Please clarify.
11. Based on South Section Tables 4.2.2, benzo(a)pyrene, and benzo(b)fluoranthene also exceed the soil component of groundwater ingestion exposure route RO but were not listed in Section 5.5.2. Please clarify.
12. Section 5.5.3 - Soil Component of the Groundwater Ingestion Exposure Route - did not discuss the soil component but discussed the monitoring wells that were installed. This section should be revised to discuss the soil component of the groundwater ingestion exposure route and the groundwater ingestion exposure route should be discussed in a separate section.
13. Tables 3.1 indicates that groundwater samples from the monitoring wells were marked as sediment samples. Please modify accordingly.
14. TCLP lead greater than RCRA limit of 5 mg/L identified at NS-GP-102 (15-17) in the West Branch of South Fork of the Chicago River should be further evaluated to determine the extent.
15. The CSIR discusses the outfall for treated stormwater into the Chicago Sanitary Ship Canal located in the southwest corner of the South Section. Is this outfall cover by any NPDES permit and have the outfall discharges ever been sampled?

NOTE:

1. Based on the heterogeneous nature of the polynuclear aromatic hydrocarbons and metals concentrations above applicable ROs, it is recommended that the forthcoming Remedial Action Plan be tailored in a way to appropriately evaluate these contaminants of concern appropriately.
2. Please submit a Work Plan which includes the additional sampling outlined in Comments #1(a)-(f), #3, #4, #5, and #14 above.

All future submittals to the Illinois EPA should include one (1) original and one (1) copy of each document.

The Illinois EPA requests a fourteen (14) day, at a minimum, advance notice of any remedial activities at the Remedial Site so Illinois EPA personnel can schedule site visits during those activities.

If you have any questions, please feel free to contact me at (217) 557-1409 or e-mail me at todd.hall@illinois.gov.

Sincerely,



NW
Todd Hall, Project Manager
Voluntary Site Remediation Unit
Remedial Project Management Section
Division of Remediation Management
Bureau of Land

cc: Mr. Ryan Hartley – V3 (rhartley@v3co.com)

Mr. Steve Gobleman – Andrews Engineering (sgobelman@andrews-eng.com)

Mr. Chris Pressnall – Environmental Justice Officer

Bureau of Land File

